ORPHANED COMPUTERS & GAME SYSTEMS

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I must thank my wife Gabriella for purchasing a T-shirt of one of my favorite bands, Bauhaus. By coincidence I was wearing that T-shirt at the World of Atari assembly on Friday evening. Someone asked if I was going to see them. "When?" I asked. It turned out that they were playing in less than an hour! By some twist of fate, I was able to get tickets right next to the stage for a concert that was sold out weeks before. The weekend began with an excellent start! It only got better.

Chris and I arrived in Las Vegas at about 11:30 AM on Friday, August 23rd in preparation for World of Atari '98. We caught a shuttle to the Holiday Inn. Onboard, we met two guys who were also going to the show. We talked about rarities, like the original Mattel Intellivision computer, and losses. "Yea, I passed one of those up, still in the box," one of the guys said. We all have our collecting war stories, of course. If I had a nickel for every cool item that I passed up when I was originally only collecting Atari...

Eventually, after some problems, we checked into our room and prepared to hook up the 7800 we had brought. But that didn't work out, even with a call to the front desk. No big deal; we could find something to do.

Just as I had expected, at the show, there was Atari software and hardware everywhere for every Atari ever made. I'd figured that that was the reason I was going to the show -- to buy Stuff. I did manage to get some really neat items, but it turned out that the best reason to be there was for the speakers. They were incredible! They made the show the success that it was.

If you missed World of Atari '98, you must make sure to attend in future years. I heard a rumor that the next show might have less concentration on Atari. Wouldn't it be great to hear Intellivision gossip from the Blue Sky Rangers? If the quality of upcoming speakers is half as good as this year's, then it is reason enough to attend World of Atari '99. I know *OC&GS* will be there! -- AT

Slot machines ***everywhere.*** In the restaurants. In the airport. I was surprised not to see them at the damn ***bus stop.*** The Holiday Inn lobby was actually a huge casino, and people were pulling levers at 5 in the morning when I went down for coffee. It was fun to go out walking around in the middle of the night, because the city's awake all the time. And it's still more in the hands of white-collar gangsters and entrepreneurs than police; you can pick up newsprint porn off the sidewalk or solicit "escort services" in front of the Denny's (if you're so inclined). You can definitely find a band you want to see somewhere in the city (Adam dragged me to Bauhaus), or just sit there and play one of the electronic Poker games built into the bar top. No one will tell you it's time to go home; the casinos are conspicuously devoid of clocks. Nobody's going to stop you from ordering more drinks; the rampant lack of water fountains is deliberate.

The two chicks who picked us up while we were walking in traffic weren't told that we were in town to attend the Atari show; we explained that we were there to pass out demo tapes for our band. It made me wonder why I was embarrassed to come off as a gaming enthusiast. We were, after all, in the city of quarter-droppers and lemon-watchers. It made me realize that video games, old or new, are social stigmas if one's too fanatical about them. You're not cool if you fixate on imaginary screen characters, yet it's perfectly okay to holler at the TV during a ballgame or discuss LSD-induced hallucinations.

It goes along with something Arnie Katz (*Electronic Games* magazine daddy) said during his keynote: We really are viewed as "mentally feeble" geeks, supposedly choosing lives of hermitage among our machines. I don't understand how this image happened. Did our mass media, a honed, cultivated chunk of deliberate mediocrity and stupidity, do this on purpose? Do video games initiate imaginative thought a little too much for the 1%?

This issue mainly deals with coverage of the World of Atari '98 Convention, and there are some nifty surprises. But there are other articles too, and Adam and I certainly hope you'll love sinking your lobes into this tantalizing tower of text and relish in the visions therein. -- CF

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If you would like to exchange your 'zine or newsletter, send it! We'll send the next *OC&GS!*

If you received this issue free, think about sending a buck for the next one. Suggestions are always welcome. What subjects would you like covered?

If you want to contribute, send us some stuff or e-mail text files to us. We love having other writers.

THE OC&GS FORUM

LETTERS AND MAYBE SOME REPLIES

Hi Adam & Chris.

Reading your newsletter definitely brings back a ton of memories. Back then, I was so into the video games. I had the Intellivision, which was my very first; I remember I paid $249 at Toys-R-Us. The controllers were a major pain. I had the ColecoVision (which was one of my favorites, 'cause of the games), the Atari 2600 and the 5200. I had the Vectrex system (which in my opinion didn't get enough support).

I even had the Fairchild video system. Do you guys remember that? There was one game I will never forget. It was the *Bowling* game. It was an okay game, but the thing that made it stand out was the sound effect: If you got a strike, it would make a sound that sounded exactly like a fart. Honest to God. And I wasn't the only one who thought that. My friends couldn't stop laughing.

I had the Atari 800 and the Commodore 64. I even subscribed to most of the magazines. I was really into the games.

A couple of quick notes about the August issue: If I remember correctly, *Antarctic Adventure* was one of the very last games produced for the ColecoVision. I could get around the first "lap," but I rarely got past the second.

Anyway, I really enjoy reading your newsletter. It's about time the "original" game systems were remembered.

Best,
Robert Soderberg
East Olympia, Washington

Thanks! It's cool to hear about people's experiences back in the days of the first era.

No, the Vectrex didn't get enough support -- meaning more GAMES! We don't remember Fairchild's Channel F system, as such, but we've read about it. That must've been quite a while ago.

Thank you for the disclosure of the first FARTING MOMENT to be referenced in OC&GS. In fact, you've inadvertently spurred a little contest.

Anyone who can think of an instance in a game, on any system, during which a farting sound is heard, please send in information on the game and the action that yields the sound. We'll publish a list of the farts and their contributors. (Okay, so contests usually involve ***prizes,*** *but hell...*Electronic Games *this ain't.)*

Just send your info to the address at left. We'd appreciate as many contributions to this new, exciting and vital compendium as possible. Your help is needed! Send in those farts, friends!

THE COLOR OF FUN

By Adam Trionfo

Has the majority of game-players and reviewers forgotten what makes a fun game? Is there a new rating system, based not on game-play, but color depth, that has come into effect? Are the millions of colors offered by new systems oozing into the brains of game-players worldwide? Has the depth of color and richness of animation really begun to disguise game-play?

Has color become what makes a game fun?

This all began as a search for the reason that I find *Banjo-Kazooie* for the Nintendo 64 so boring. Don't worry, this isn't going to be another trek down the well-trod road of poor game-play. There is no need to rehash that here. In fact, dare I say it, the industry may finally have heard us gamers, for game-play seems to be making a general improvement. So, then, what is this all about? Simple: red, green, blue and all the variations in between. This is a series of observations about color, an important part of game-play that few gamers give notice to, with even fewer realizing the attention to detail that a developer must heed to make a game playable.

Some games use color as the actual means of playing. *Columns, Dr. Mario* and *Bust-A-Move* all rely on the player matching colors in a certain sequence to complete a level. To me, these games are playable because I can differentiate between the colors. I match green with green, blue with blue and so on. But what about someone who is colorblind? It isn't so simple in that case. Of those three examples, only *Bust-A-Move* is still playable to someone who has difficulty distinguishing colors -- and I never would have noticed if not for a recent incident.

While my wife and a male friend were playing *Bust-A-Move,* the friend exclaimed, "Gotta find a star!" I had no idea what he was talking about. I later discovered that he was matching the small shapes inside each color instead of the colors themselves, because he is colorblind. I had never thought of playing that way, had never even taken notice of the small shapes before. But anyone who is colorblind must play any game that relies heavily on color in a completely different way than I do. What other games are ruined for someone who is colorblind when a developer hasn't taken notice of this part of the gaming population?

That event gave me two realizations: It opened my eyes to the vastly different experiences each player glimpses when playing the same game and just how important color is to all games. Most individuals have favorite colors and color schemes. It is the reason why many people change their color environment in *Windows.* Of course, some colors look better together than others. Experience at work has proven this to me. I have come across users that have desktop colors that make my eyes whine -- dark-green backgrounds with bright yellow foregrounds, yellow on red, thin vertical stripes atop large horizontal bands. Some of the colors, it would seem, go against nature itself. But if the user likes it, then even if my eyes might bleed from color stress, it is perfectly acceptable -- for them.

This is where the trouble can begin. Ever played a game and thought to yourself, "Who designed the colors for this? They're atrocious!" This happens all the time with shareware and PD products. This is because these are often one-person efforts, bless them, and little consideration is given to the user interface at times. The theory seems to be, "What is good enough for me is good enough for you." While I don't agree, I can understand how this important factor could be overlooked by a one-person design team. But what about games that are released as a large group effort, as most games now are? Shouldn't someone be held accountable for this?

The Nintendo 8-bit seems plagued with this problem, especially in platform games, where the limited colors often make it laborious to see the difference between the player's character and the background patterns. The *Ninja Gaiden* series, for instance, uses really poor color choices that make the games difficult to play. Yet these are considered to be among the highlights of the NES library. And well it should be, because the games are fun to play.

Current consoles and computer set-ups are able to display millions of colors. This means that there is more potential for problems when a game is created. With so many choices available, it becomes easier to make a mistake that makes a game difficult to look at. But computer artists have realized this, and for the most part are making wise choices. The problem now seems to be that too much effort is spent on color choice and less is spent on game-play -- which is why, I have concluded, I despise *Banjo-Kazooie.*

Banjo-Kazooie is a recent Nintendo 64 game. It has all the speed and color depth that the machine can offer. It has become the new standard of excellence on that platform, with at least one good reason: it does look terrific. But with cartoon-like graphics

along the lines of the Mario series and a very silly sub-adult storyline with many childlike features, this title ***seems*** squarely aimed at a young audience. My four-year-old son loves the game, so this insight may seem correct -- but it isn't. *Banjo-Kazooie* is popular among young and old alike, and it is a runaway best-seller. But why? The game is so boring!

How can a game touted as one of the best of all-time, praised in all of the video game magazines as top-notch fun, be so boring to me? I feel as though I am just going through the motions -- move the joystick left here, jump the bad guy there, get the power-up now, advance to the next level. In the same way that *Zool* was a complete rip-off of *Sonic, Banjo-Kazooie* is a blatant rip-off of *Super Mario 64.* They both have the same quality of game-play as well; there is no pleasure at all involved in either game for me. But I am in the minority, among the very few who look at *Banjo-Kazooie* in this light. So I know that more games are going to be released, for all platforms, that are played and drawn very similar to this pathetic excuse for fun.

The graphics in the typical game are meant to grab the player's attention. After this, the game has time to possess the player's continued interest. Both feats are achieved, in part, through the use of careful graphic detail and color balance.

The early game machines with only black and white display capabilities seemed archaic even by 1980 standards. When game systems began to have color capabilities in the mid-to-late-seventies, they were rather primitive, but the colors were used to really grab the player's attention. Can you picture a kid asking mom and pop for a B&W system when a color one was available? It probably didn't happen (though perhaps Steve Jobs might have preferred a B&W unit). Atari always lead the color crowd, with one of the best examples being the Atari 400/800, released in 1979. It had 16 colors with 16 different shades, for an effective color range of 128 (later increased to 256). This didn't change much until the original Amiga computer, released in 1985, with its palette of 4096 and its ability to display 32 simultaneous colors on a normal screen (this was just one of the Amiga's groundbreaking features). Now we have the Sony PlayStation and the Nintendo 64, able to display more colors than the human eye can even distinguish.

With so much effort at building color machines behind us, it seems logical that color should take a back seat to graphics when a game (or even a computer application) is reviewed. Ironically, though, color choice is a part of game-play that rarely, if ever, gets mentioned despite its importance. Developers have come to realize that well- balanced color makes a game look more attractive to a player ***and*** a reviewer. So much effort is put toward the placement of color that even poor-quality games make good use of it. There has become little need to mention color anymore, since just about all games use it effectivly.

Game developers have learned over the years how to grab players. Some of these ideas work, like improving the sharpness of graphics, while others, though still used for some reason, have failed -- like movie-to-game conversions. The new trend seems to be getting the best color from a system, and with good reason: It sells more games. Good graphics, movie titles and the use of colors have never made a good game, but they do manage to sell bad games in quantity. When the next best thing with rich color that "looks almost real" is released, keep your money and try before you buy. The game devlopers have found what makes a lot of gamers tick, and they are now pushing the right colored buttons to get you to buy inferior product. Think for yourself and see with your smile, not just your eyes. -- AT

The Effectiveness of UNDERSTATEMENT

A reaction piece by Chris Federico

Colors mean more when you're not taking their effect on you into account. A little kid playing *Asteroids* has no idea about aesthetic adrenaline triggers. I wonder if the game would have grabbed me so fastly if it had been colorful; *Space Duel,* Atari's coin-op Vector contest meant to succeed *Asteroids* and its *Deluxe* sequel, was only marginally exciting compared to the cold vacuum of space evident on the understated screen of the single-color original.

That game, *Star Castle* and other early Vector contests were a bit frightening because of their cruel simplicity. These rocks hurtling at your ship don't care how they look to you; they're not colorful or friendly. You've been placed in this predicament and there will be no sympathy or visually comforting side. Deal with it, and don't even engage the concept of color. Death in space has no spectrum. Minimal coloring only works in panic-games like this, but when it works it ***really*** works, because it forces your attention away from being impressed by fashion and centers you on the game-play itself: the raw, essential deal you're dealin' in.

I wonder if that's why the designer of 2600 *Asteroids* could have made such a graphically simple concept so much less exciting. The colored rocks just didn't seem as threatening. -- CF

World of Atari '98:

The World-Builders Speak

by Chris Federico

It was so much fun listening to these people, glimpsing through the little windows they opened into their memories and gleaning the provided insights into the imaginations that were responsible for so much enjoyment throughout my life. Most every word was fascinating, but I won't lay a whole transcription on you; here are some of the highlights from the most productive few hours Adam and I ever spent with a tape recorder.

Donald A. Thomas, Jr. spoke first, and he's a really friendly guy who retains a sincere interest in gaming; you can tell he's a fan. He didn't join Atari until 1989, but he was able to provide some clarification about how the Tramiels approached marketing. They apparently didn't know about many of the games, not being players, and relied heavily on cosmetic qualities, assuming that the slick Jaguar would sell through promotion only and forgetting that word-of-mouth was their strongest asset; Jack Tramiel didn't think that the availability of many games was as important as bombarding the public with commercials and magazine ads. It was evidently the usual "the consumer is stupid" stance.

Dan Kramer and Jerry Jessop, two hardware designers, talked about testing new products in their lab. While they were being sent ridiculous things to work on, like the 5200 controller that almost everyone at the company hated, Mr. Kramer fooled with the wiring of a trak-ball controller he yanked from a *Missile Command* coin-op. He knew that the analog controller would make a lot of games unplayable, so he was able to concoct a home version of the trak-ball in time to reach stores very shortly after the 5200 itself came out. He also designed the 2600 version of that controller.

Arnie Katz, Joyce Worley and Bill Kunkel, the three founders of *Electronic Games* Magazine, each took their turns to speak, and they all provided some commentary about the gaming community in both the past and the present.

Mr. Katz spoke about classic games vs. newer ones: "What they have is a crystalline simplicity." It's tough for anyone to articulate why old games hold such fascination for their fans, but Mr. Katz is one of the true enthusiasts, and he speaks with vigor about the addictive qualities of any well-done game, new or old: "Very much, I think that *Tetris* was a return to the Atari video game values, re-expressed in computer terms. I don't think that the essence of what makes a good game has ever changed.

"Bill Kunkel and I worked on many game designs together, and one of the things that Bill always said is that if you can't describe the game in a sentence, you're already in trouble. I think that if you look at some of the games that are coming out now, some of the games that are going to be forgotten in six months, what they have in common is that they are way too esoteric, they're way too convoluted, they're closed-in on themselves and they're for people who are basically going to exhange having a life for playing a game.

"I think that complexity and deep richness in games is very good, but when it comes at the expense of playability, when it comes at the expense of the experience, then I think you're going from something that interests a mass audience of millions of video and computer gamers to something that's going to interest 100,000 hard-core players. It has its place, but we should recognize it."

He addressed questions from the audience, as all of the speakers did, and one of the subjects that always came up was the state of gaming today: "Where I would like to see it go is toward more innovation, to fewer 'me too,' generic clone games." Yeah, you're not alone there!

He also had strong opinions about the way in which gamers are viewed by our society: "What I would like to see in the largest sense is for the general public to have to gain an appreciation of our audience, and see outside trying to regulate the games we can play, trying to limit the content of games and trying to characterize us all as feeble-minded twelve-year-olds. That really sticks in my craw. That really bugs me. I would like to see a recognition that video and computer gaming is the world's most dynamic hobby, and in fact is one of the largest leisure-time interests in this country. We're talking about a hobby that, in dollars, is equivalent to the movie business.

"So I think it's time that we should get a little respect for the fact that this is our interest, this is what we like. We are not little children."

Well-put!

Mr. Katz was the only speaker to address violence. "Basically, I feel that the legislators who have made an issue of video game violence are electioneering a headline," he

remarked with conviction. "I think that it's one of the most cynical attacks that I've seen in a long time. It's very reminiscent of the attack against rock and roll music in the '50s and '60s, and it's very reminiscent of the attacks against comic books in the early '50s. At one time, whenever they arrested somebody and you heard the report on the radio or on TV, they would always add, 'A quantity of comic books was found in the closet.' Y'know, as if reading *Superman* or reading DC comics meant that you were on the road to perdition. I just don't see that!

"I think that when it comes to violence, you can see more violence on the news, you can see more violence in movies that are on TV, and certainly a lot more violence in movies that you can rent and take home or go to the theater and see, and which twelve-year-olds go to every single day. The violence in games is cartoon violence.

"As I said recently in commenting on the new spate of hunting games, no animals were hurt in the play of this game. Somebody sat there and killed pixels instead of Bambi. And as far as I'm concerned, the violence that worries me is the violence in the streets, the violence in our schools, the violence on our roads and the violence that permeates our society. I honestly don't think that playing *Mortal Kombat* encourages kids to go out and rip somebody's spine out. It's not real! Kids know it's not real, we know it's not real. The only people in the country who don't know it's not real are those senators who are holding the hearings. Well, I think they're smarter than that; I think they know it's not real too."

Whereas Mr. Katz was pensive and measured, formulating his statements before speaking and slowly stating things, Bill Kunkel (ribbingly introduced as "Ego-Boy" by Mr. Katz) was like a comedian, just as willing to entertain with his reminiscences as to disclose insights. "[Atari headquarters] was a city," he began. "This place needed a monorail system! I have never seen anything like it in my life. I think that if Atari symbolizes gaming in a lot of ways to a lot of people, it's because nothing, not even Nintendo at its biggest, ever had a ***city.***" While the statement itself is tongue-in-cheek, he nailed the embodiment of all that Atari, this mysterious wizards' cavern, stood for. "I mean, this place was incredible. I remember watching them putting together *Red Baron* machines in the coin-op department, and going over and seeing *Championship Soccer* being developed, and the developer going up to his boss to tell him that he was gonna do it in a vertical scroll, and the boss telling him, 'You can't do a vertical scroll on the 2600,' and he said, 'I'm glad you didn't tell me that last week!'"

The willingness of designers to push the limits of the 2600 and take risks came up quite often during the keynotes. It's a perception that sets them quite apart from the relatively safe designing environment that cultivates the formulated games seen on the shelves these days. "I learned a long time ago that there are two kinds of people in this business," Mr. Kunkel continued. "There are the people who say, 'Well, here are the rules; here's what you can do, and here's what you can't do,' and there are the people who say, 'Here's what I wanna do; I'll find a way to do it.'"

He went on to describe, receiving rapt attention of course, the inception of the famed magazine he helped ignite. "We had this idea for a magazine, okay? We knew that there were going to be magazines about games. There are always magazines about anything that people will take as part of their lifestyles. The question was, could we get that magazine out first?

"We had about a five-month stretch between when we first put to bed *Electronic Games* #1 and the day when it actually hit the stands. And I went out every day to the newsstand, truly expecting to see another magazine sitting there that had beat us. Every day I went, and that magazine was never there. As a matter of fact, that magazine didn't turn up for about six months after our first issue appeared. So for six months, we ***were*** the gaming press."

His memories of those days remain vivid: "I remember walking around the halls at my first CES [Consumer Electronics Show] in Chicago in 1981, and I've got about 100 copies of the cover of the first issue of *Electronic Games*, which is kind of burnt into my brain -- the image of that *Space Invaders* ship coming out of the television set and zapping the kid playing it. I had that, and on the backside of it, there were bullet points for why this magazine was going to be the next great thing in the world of publishing. There were the usual three or four companies to go visit, and I handed each one of them this sheet. It would take them about five minutes to figure out that it was actually saying that we were going to publish a magazine that was going to be exclusively devoted to games. Every one of the companies said the same thing to me: 'Where are you gonna get all the games?' I had faith. 'They'll come. You guys'll make them, and if you're successful, more people will

make them.' None of them believed it!" It's hard to imagine a gaming industry without the accompanying periodicals and help-out literature, especially after having seen the peak of *Nintendo Power,* the infamous company's commercial-disguised-as-a-magazine.

Mr. Kunkel went on to share memories of his judicial involvement in support of the industry's underdogs. "In 1982, I testified for Magnavox against Atari," he said sardonically. "Probably not the best career choice one could make, yet I happened to believe that Odyssey was right. It involved a game called *K.C. Munchin!*. I don't know if anybody remembers that game, but at the time, Atari had decided that it had paid damn good money for its *Pac-Man* license, and it was not going to allow any other gobble games to live on the face of the earth, in any format on any machine. They originally went after all of the small developers who had put out games like *Ghost Chase, Jawbreaker, Piranha* and *Snackman*. And here's one company, Odyssey, who develops a gobble game that's unique!

"The idea of this game is that the fewer dots on the screen, the faster they move. You've gotta chase them around and catch them. To me, this was as major a step beyond the original game as *Galaxian* had been past *Space Invaders.* I felt that it was totally legitimate."

Like Mr. Katz, Mr. Kunkel addressed the modern video game community, venturing opinions on the collapse of Atari in spite of its fantastic later machines. "If there's no stability, it's so hard," he said earnestly. "You're just getting to the point with a system where you know what it can do, where you know what its powers are and what its strengths are, and lord love a duck, the magazines are already pumping out the specs to you for the next machine, which may or may not ever appear in Japan even! I think that this is how our industry, and especially the press in this industry, eats its young.

"I'd like to see the industry stabilize. Just say, 'Let's sit still for a while, guys.' Even if we can make a more technically proficient system, isn't it better that for once we max-out the potential a little bit more on these systems before we throw them in the dustbin? Every machine, every platform I've ever watched, I've seen the best games for it, in most cases, come out just before it's dumped."

His outlook ultimately came across as optimistic: "Have computer games and console games ever sold this well at the same time? Not in ***my*** memory! But that's what I'd like to see: stability, and the potential of these systems really explored."

Like Mr. Kunkel, Rob Fulop was uninhibited with his words and spoke with ease and humor. He made his keynote shortly after I talked to him (see the nifty interview article elsewhere in this issue). He approached the podium holding up a boxed copy of his first 2600 game. "I just bought one of these: *Night Driver.* There's nothing like buying your own game! The fun thing about buying your own game is when you have to bargain with the guy. You don't want him to come down in price. You really want him to keep it high!"

All ears and eyes were fastly fixed on him as he recalled the circumstances under which he met the founder of Atari. "I dropped out of Berkeley in the late '70s to be a professional Backgammon and Poker player. I kinda stumbled around Las Vegas a lot, Reno, Lake Tahoe, places like that. I ran into a guy at a Backgammon tournament named Nolan Bushnell, who was the guy who invented *Pong,* and he was my opponent in, I think, the quarter-finals of the Backgammon tournament. The guy got a double-match point, which is pretty intense with one more game to play in the match. I lost the game against Nolan, and he won the tournament, but I got a job. So that was the big break that I had.

"He gave me a job in the coin-op division at Atari making Pinball soundtracks. *Superman,* stuff like that. But then I did a couple games at Atari: *Night Driver, Space Invaders* for the Atari 400/800 and *Missile Command* [for the 2600], which I think was probably the funnest game that I did at Atari."

He explained the motivation for *Cubicolor,* his most recent cartridge which he sold himself as a limited edition. "I had done *Space Invaders, Missile Command, Demon Attack* and *Cosmic Ark,*" he explained. "It was enough space for me. Four space games in a row. So I did *Cubicolor.* It was a little puzzle game that never got released. And then I did a game called *Fathom,* which was not my best work. Before leaving Imagic, I did a little game called *Actionaut,* which no one has ever seen. I think there's a ROM somewhere in my attic. You had to program robots." Sounds like a prescient *Hacker II!*

Mr. Fulop's memories of his fellow designers were rooted in pride: "The beauty of early Atari is that we figured out all of the premises. In the first five years of Atari, we figured out, I think, the basic five premises of games, the first of which I put into *Night Driver*. It's the same as *Pole Position.* It's the same as *Grand Prix.* Nothing's really changed; they have 18 virtual reality stations in a row, and it's all the

same premise. The premise of all of these games is basically, go fast. It worked ten years ago, it worked twenty years ago, and I guarantee that thirty years from now, we'll have the same guy sitting there, really old, sitting around an old VCS, because the same basic games work. Go fast.

"Premise number two: You got *Pong, Breakout, Frogger, Tetris* -- the premise of all these games is basically anticipation. They're all about waiting for that little thing to get there: 'nnnnnNOW!' It still works.

"The games *Space Invaders, Galaxian, Phoenix, Robotron, Centipede* and *Demon Attack:* Anyone know the premise of those games? Kill everything, basically. Kill them before they kill you. Those games, they work, they've always worked and they're always gonna work. You put a bunch of shit up there and you gotta kill it all."

His insights into game design remained fascinating throughout this dissertation. I was thrilled to hear him explaining a point I'd brought up in the very issue of OC&GS I had given him, in the article "Making Worlds," as he tackled the appeal behind *Pac-Man:* "[It] has a really difficult premise. A lot of people don't get it. Anyone know the premise of *Pac-Man?* The deep play pattern and why it works? The funnest part of *Pac-Man* is what? *Pac-Man* is about revenge. It's about, 'I'm helpless, I'm helpless, I'm helpless, I'm powerful.' That's why the game works. It may be one of the reasons women like that game. I don't know. There's a pretty deep connection to that feeling of being helpless and then being strong. I haven't seen that play pattern in a lot of games. It's really powerful, actually.

"And then *Adventure, King's Quest, Myst, Riven;* does anyone know the premise of those? A treasure-hunt, basically. And the excitement of finding. The old *Adventure* game, right? Warren Robinett's game where you find the black castle? That was just as exciting twenty years ago as going into *Riven* and finding a new world when you go underground. There's not one bit of difference. It's a treasure-hunt. Finding new things.

"The old lesson at Atari that Nolan yawned us over and over again with was that you gotta make it easy to learn and difficult to master. I say it like this: Easy to say, hard to do."

He closed his designing lesson with one more explanation of why certain games work well. "The really good games have laid into them the thing that I call OIC," he stated, pronouncing "OIC" as a word rather than initials. "The OIC is that moment in time when you lose the game and you go, 'Oh, I see.' O-I-C is the thing that you discover about a game when you go, 'Oh, I see what I gotta do.' Then you play it again, and you go, 'Oh, I got it,' and you play it again. The really good game designers lay those things in there for you to find. It's amazing how the new games that I've played in the last five years don't have those OICs in there. Every time you lose a game, you should go, 'Oh, I see.'" It was cool to hear him wording something so well that eludes tangible explanation for many of us.

"Then, on top of that, you lay your decorations. Again, you get a lot of games now where I don't see the decorations as nearly as powerful. The decorations are simply bonus ideas; instead of giving you fifty points at the end of *Missile Command,* I give you five points ten times. It goes, 'Ding ding ding ding ding ding ding!' That's powerful stuff. That makes you feel like, 'Wow! I got so many points, it can't even count! Look how many points I got!' That's really powerful, as well as the little sound effects."

He went on to describe his actual working environment: "Old Atari, when I was there in '79, '80, '81 -- the culture of the company really made these games work. The reason was that the culture was so loose. We had lab benches set up, and we had the programmers, who were individual artists -- authors, basically -- working in a lab. You had a lab bench. So you wouldn't work in an office; your game was up there for public dunking every day. You put your game up there, and it was all peer review. The guys -- and one girl -- went to lunch every day, and if the game was fun, guys would stand around someone's play station and play their game. And that was how you knew if you had a good game. If no one would play your game, your game basically was bogus.

"If a game came out, it was because people were playing it. And if no one played the game, the guy who was doing it would realize, 'My game sucks.' You lose it or get it better. That's really why it worked."

He relayed memories of one of Atari's most innovative, longetive coin-ops. "The winners just came bubbling around to the top," he reiterated. "*Tempest* was a beautiful game, and it was started by the guy who made [the coin-op] *Missile Command,* Dave Theurer. He wanted to do *3-D Space Invaders.* So he sat, and it took about a year. There was a lot of difficulty to the game, and screen real estate was a big problem. The monsters looked great -- they were vectored monsters -- but the game never played well, and it just basically sucked.

"Finally, he couldn't take it anymore; we were teasing him so

much about it. It was very much his decision: He trashed it one day, and four weeks later he showed us *Tempest*... He would never in a million years have sat down and just dreamed that thing up on a piece of graph paper and said, 'Here.'"

He addressed the game I had told him he underrated: "You know what I've taken out of *Fathom?* My first provocative thing. After you won, the mermaid would go downward, and the little dolphin would go down, and all these bubbles came up. I saw it in a James Bond movie. They told me, 'Take out the bubbles.' I said, 'Hey, it's all in your head, man!'"

John Harris took the stand and recalled the seeding of *Jawbreaker* with some bemusement: "I really just wrote *Pac-Man.* I had seen other people doing it; as a nineteen-year-old kid, I didn't even know what a copyright ***was.*** I didn't know that it was wrong to copy someone else's work. So I took it up to [Sierra On-Line president] Ken Williams, and I guess I just got into the industry right at the time when the video game companies started cracking down on home computer versions. So he took a look at it and said, 'I'm sorry, I can't sell that. It looks too much like *Pac-Man*. You're going to have to disguise it a little bit if you want me to sell it.' So I brought it in the next day, and I'd put mustaches and sunglasses on all the ghosts. While good for a laugh, it was obviously not what they had in mind. I still have that version."

He also recalled how his famous coin-op translation came about. "I wanted to do *Frogger*," he explained, "and I went to Ken Williams and said that I thought it would be a really good license, and why don't we just go out and, y'know, literally see if we can get a legal license for this and do the real thing? And we were able to get that from Sega. After we got approved, Ken said, 'Y'know, I got a computer show coming up in three days. What can you give me as a demo?' I said, 'Well, I'll see what I can do.' And I worked something like twenty to twenty-two hours a day for three days, and came up with what ended up being the shipping version of all the graphics -- all fifty colors on the screen, all the motion and everything. There was a static frog sitting on the bottom the screen that you couldn't move yet, but basically, everything else was done. I gave it to him, and I was really thrilled; I really loved promoting Atari machines."

A smirk appeared on his face as he ended the story: "I didn't find out until a long time down the road that that show was an Applefest! He literally had a big-screen TV, an Apple computer sitting in front of it, and an Atari computer in a cardboard box behind it! The only thing that made that incident fun for me was when I saw the Apple version of *Frogger,* and what it actually looked like. It was so bad. They took so much heat over that, because they showed this other version."

The designers who spoke gave off an overall impression of detachment from the industry they worked for. Hearing things like John Harris's last comment above, the listener got the impression that these were astonishingly inventive, risk-taking builders of imaginary scapes who remain, to this day, confounded about the decisions their companies made. I hope you had as much fun reading these memories and insights as Adam and I had listening to them! -- CF

Easter Egg Update

by Chris Federico

Last issue contained an article called "The Complete 2600 Easter Egg Archive." A couple of people were kind enough to send me some corrections and additions.

Russ Perry, Jr. e-mailed me with the following information: "As far as the 50,000 point bonus in *Bump 'n Jump* goes, it's definitely intentional -- the arcade game awards you that bonus for smashing 0 cars, and the 2600 version is merely faithful.

"As to *Mountain King,* I gather by your methods that you (or someone you know) discovered this, but also that you didn't explore it enough. There are not two secret areas above the mountain, but only one -- it wraps away the same way the mountain itself does. It's hard to do, due to areas that freeze you or make you fall back down, but it can be done in both directions." Thanks, Russ! You rock!

Mark Androvich was also nice enough to take the time to e-mail me:

ADVENTURES OF TRON -- "If you hold down the select button while turning on the power, a message appears on the title screen giving the name of the programmers."

He explained the reason for the Easter egg in *Fathom:* "Imagic's address was included not because Rob Fulop was trying to be funny, but because there was a contest involved. You were supposed to send your name to the address that appeared on the screen -- I have never heard who won or what the prize was."

Thanks, you two! -- CF

A CONVERSATION WITH ROB FULOP

By Chris Federico

"Mr. Fulop?"

"Hi."

"Hi. It's an honor to meet you. My name is Chris. You're one of my heroes."

"Oh! Well, thank you."

That's how it started. I mean, he was just ***standing*** there. I guess I kinda stole him from Keita Iida, the convention's chief organizer, with whom he'd been chatting. But I had to at least get Mr. Fulop to take my Sharpie and sign my *Missile Command* cartridge, along with Adam's *Cosmic Ark.*

Do you know what it's like to lean on the same Pinball table that one of your childhood sages is leaning on about two feet away?

I didn't tell him, "Can I conduct an interview with you?" I just talked to him. He's an incredibly nice, approachable guy. He's hilarious, too. Brown-bearded and somewhat studious-looking, he's got an eastern U.S. demeanor that keeps his language blunt and energetic.

Donald A. Thomas, Jr., a marketing manager with Atari during the company's later years, came by and interrupted our conversation (politely) to ask Mr. Fulop if he'd be staying in town through the next day (Sunday). "No, just today," was the answer. "So I better get a couple cartridges together for you to sign today, then," Mr. Thomas said. "It's nice to meet you, by the way." They shook hands and had a little business-oriented conversation, right in front of humble ol' me. I'm standing there leaning against an Atari Pinball table prototype, looking back and forth between two men responsible for bringing so many enjoyable evenings into my room (and they're not even pimps).

"What are the Tramiels doing now?" Mr. Fulop asked. "Besides trying not to get lynched?" I interjected. They laughed politely. (Yeah, dorky ol' me.) "Oh, just enjoying life at this point, kinda hidden away," Mr. Thomas replied.

So now you get to see how open and casual these types of guys were all through the convention. Here's my talk with Mr. Fulop:

CF: All this must be flattering, to an extent.

RF: Sure. But it was so long ago; this is kinda weird, y'know? Before I decided to make a few copies of *Cubicolor* for sale, I had no idea. I mean, I just had no idea. I'm glad this culture still means something to so many people. It's neat to think that there are people who were kids when the first games came out, who decided to get into computers because of those games. They became programmers because they were inspired by that stuff.

CF: I love *Fathom.*

RF: You like *Fathom?* That falls so short of...I don't know.

CF: But think about that game. There's no other game like it.

RF: What, you mean kinda *Adventure*-like stuff except...

CF: But which you had to apply your memory to. It's an action game as much as an adventure game.

RF: Oh. Well, thank you.

CF: And *Cosmic Ark.* You were among the best.

RF: Thanks for saying that, but it's funny; *Cosmic Ark* is my least favorite game. Out of my own games, I mean.

CF: Are you kidding?! That game's incredible!

RF: But it could have had more.

CF: Well, I imagine that for that machine, you had to go back and crunch your code once you were done...

RF: Oh, they were shrink-to-fit games. That's exactly it.

CF: Like, "God, what do I take out?"

RF: Right. You had to decide what to leave out. And you just go at it until you're sick of the thing, and you get it out there.

CF: Adam and I, but especially Adam, the guy who co-writes this newsletter with me [indicating the issue I plopped on the Pinball table for him], are endeavoring to learn Stella programming. Adam even modified a game. He's the one who knows a lot about machine language already. He wants me to help him study the stuff, but the 2600 seems so hard to program...

RF: You're doing that ***now?*** Why are you interested in programming the 2600?

CF: Just from an ongoing fascination with the machine. It hasn't diminished; it's grown.

RF: Hmm. That's really neat. It's neat that kids were inspired to get into the field because of the old stuff. How old are you?

CF: 26.

RF: So you were a kid.

CF: I was nine, or in there somewhere. You should meet Adam. He's mostly doing that stuff. I'm the observer and the student, to an extent, at this point. He's around here somewhere...

RF: The 2600 is a weird machine. It really is. It's weird to program.

CF: Like the control you have over the screen lines...

RF: Yeah, you have to pay attention to a lot.

CF: Do you agree that *Demon Attack* opened a lot of eyes to what the 2600 could do?

RF: What *Demon Attack* did was to prove to a lot of people that the 2600 was capable of good arcade-type games.

CF: It seems like you really put your heart and soul into those games...

RF: Yeah, I did. I really did.

CF: I mean, that was 1982. Compared to the other games around at the time...

RF: Right. It proved that it could be done. It was all just craftsmanship.

CF: Well, you sure had it down. I remember seeing that when I was a kid. My jaw dropped open.

RF: [Laughing] Well, it's neat that so many people still like that stuff. I had to buy this today. I didn't have a copy [removing black-and-white-boxed copy of *Night Driver* from his bag].

CF: [Laughing] You didn't have a copy of your own game?

RF: No. There's a bug in it. Did you know that?

CF: No, I'm not aware of any.

RF: If you turn the paddle all the way to the left, and then turn it right really fast, the screen wraps. [Anyone know how to initiate this? -- CF]

CF: [Laughing again…what a dork] Really?

RF: Yeah. It was a long time ago, and I didn't know how to prevent little things like that. I also had to get these to play it [removing a packaged set of paddles from his bag].

CF: [Still laughing] Rob Fulop has to buy paddles at conventions!

RF: Yeah, I don't have any!

CF: I'd be honored if you'd take a copy of our newsletter. You're mentioned in this issue [indicating the newsletter again, which has just been lying there].

RF: Of course I'll take it. Thank you. I'm in here [flipping through it]?

CF: Yeah, in an article about Easter eggs.

RF: [Finding it] Ohh, yeah, look. *Missile Command.*

CF: That's a great thing, the "RF" popping up out of the city...

RF: Yeah, y'know, we were the first group of programmers to do that. To sign the games.

CF: A bit rebellious.

RF: Well, sure. We didn't get credit. It was ridiculous. [Discovers the *Raiders Of the Lost Ark* Easter egg section] Oh, here's Howard!

CF: I assume you knew him back when....

RF: Oh, sure. I just [recently] stopped by.

CF: Really? This is ***so cool!***

RF: Well, great! I'm glad this sort of thing is happening. What do you think [indicating the tables of stuff around us]? Pretty well-done, huh?

CF: Oh, yeah. It's a well-put-together convention.

RF: Right? I mean, hard work.

CF: Definitely.

RF: Well, it was nice meeting you.

CF: You, too! Thanks so much for talking!

RF: Well, of course.

Yes, I let him finish the conversation. You don't just say "Nice chattin'" and walk away from the guy who designed games you spent daily hours playing throughout your youth (and in fact throughout much of the present, now that I think about it). I mean, I can't explain how much magic that guy was responsible for during my childhood alone.

Adam met John Harris and had him sign an 8-bit *Frogger* cart. I mean, these guys were so nice, so willing to talk. There was no ego vibe there at all. After several e-mails, a mailed paper issue and a phonecall, I was able to get Richard Tsukiji, one of the WOA organizers, to allocate space on the table in front of the main room so we could give out the piles of Vol. II, Issue #5 that we brought along. Keita then let us bring half of them into the main room itself and set them out, along with our subscription forms, at the Atari Headquarters table. Neat people! -- CF

Bill Me!

By Adam Trionfo

If I were to say that today's *Windows* machines were sadly lacking in features, I would be completely wrong. The statement isn't true, although it used to be. We probably all know someone who avoids Microsoft products. But it isn't easy to do anymore. There was a time when, if you didn't want to use *MS-DOS* or *Windows*, there were many other viable choices. But now what do we have? Are there really any alternatives to *Windows* available to the average PC user?

After IBM introduced *MS-DOS*-based machines in 1981, there were plenty of superior alternatives in the clone world that quickly followed. In 1984, the Macintosh was geared toward those who despised the massive IBM corporation (and all that it represented). The 8-bit computers (Atari, Commodore, Apple, TRS-80) of the early eighties were reasonably competitive against the IBM clones, though most were not able to display eighty columns of text without upgrades. Most businesses would never have purchased even an IBM or Macintosh computer that didn't have the ability to display 80 columns of text. This may be what ultimately spelled doom for the 8-bit computers.

When the Amiga and Atari ST were released in 1985, they were both reasonable (and in many cases better) alternatives to the IBM and Macintosh computers of that time. The Macintosh was still B&W only, while the IBM was, at best, using 16-color EGA displays. Who didn't prefer a computer with 4096 colors (Amiga) or 512 (Atari ST) vs. the 2-color Mac or 16- hue IBM? The answer is the business world. Businesses didn't care about color. Monochrome monitors were cheaper, and thus few offices even had color machines of any sort.

Without well-known and powerful business software, the promoters of non-*MS-DOS* machines were not able to penetrate the business market. The amount of advertising that both Atari and Commodore used to push their new 16-bit computers was minimal, and was targeted mainly at those who already owned company products.

IBM already had a reputation in the business world as THE company that made mainframe computers (even the typewriter reputation probably helped sell the initial IBM PC's). By 1985, when the ST and Amiga were released, IBM had been able to use that same leverage to dominate the personal computer market. Atari had the disadvantage (at the time) of being viewed as a game machine. Commodore's 64 was also viewed as a machine used primarily to play games. Anyone who used these machines knew better than that, but their words usually fell upon deaf ears.

Times were different then, and home buyers didn't admit to the purchase of computers to play games. People supposedly bought computers to balance checkbooks, do their taxes and write Important Letters. It was no fluke that most home-based software that was eventually purchased turned out to be games, but few dared to admit that games were the reason they purchased the computer in the first place. Today it is the game industry that outwardly drives people to purchase new and better machines. Playing the latest games requires the latest hardware, and thus an outlay of more cash on a regular basis.

The large number of *MS-DOS* machines sold encouraged the software industry to write a large amount of software, including games that were very bad by contrast to those on other platforms. But it wasn't the games that mattered. The *MS-DOS* world had plenty of quality software for business use, while the other platforms had little. Big-name companies that converted top software like *WordPerfect 4.1* were booed because their conversions were filled with bugs and did not take advantage of the machines' extra capabilities, like better user interfaces (most 8-bit and *MS-DOS* software used multiple keystrokes to accomplish such simple tasks as bolding words or saving documents). People felt that they deserved more, and they were right. But who was there to fill the void? Was it Apple, Commodore or Atari? No, it was Microsoft.

IBM isn't responsible for the popularity of PC clones. You will not find an actual IBM product in every house that has an Intel chip set, but you will almost always find *Microsoft DOS* or *Windows*. In the end, when the business community bought into IBM clones, it was the end of alternative dreams. If there had been Mac, Atari or Amiga clones during the rise of the PC clone, the computer world would have turned out very differently. But those clones have only come to exist in recent years in small quantities -- certainly nothing compared to the *MS-DOS* world.

With nothing but time on their hands, Microsoft was able to to take full advantage of the slow advances of other software companies. The first version of *Windows* shipped in 1985. It was awful when compared to other platforms' user interfaces of the day, but it didn't matter. Microsoft's cash cow, *MS-DOS*, would be there to support them until a good version of *Windows* was released. Now with *Windows '98* and *Windows NT*, people are, unfortunately, still waiting. -- AT

The Lines Continue to Fade

by Chris Federico

Electronic technology has progressed over the past few decades at a speed greater than that of the advancement of any other industry or collective genre. This rapid rise in our culture's technological reliance is paralleled, not coincidentally, by the fastest thinning of the boundaries between parts of life ever witnessed. We're lucky to be alive during an era in which major changes are being seen concerning mankind's interaction with his inventions, and how our machinery affects our collective outlook.

The lines have been gradually fading for centuries, of course, but only with the quickly improved electronic technology is this change tangibly detectable. The world is shrinking faster than it ever has before. Once upon a time it was huge, and things that happened in far-off lands were impossible to witness firsthand, based rather on hearsay. There was romance in the concept of distance, not to mention the passage of time.

Then mail could be carried by horse or boat; the distances became shorter, since people could communicate easier. But man wasn't as interested in collecting facts as in watching his world's history gradually accumulate as an aesthetic tale of gain and loss.

Then, with the advent of the airplane, the world became even smaller. Never before could someone step aboard a vehicle in expectation of arriving across the country in just a few hours. Mail would arrive within a week of its exodus. Film and TV helped along this thinning of boundaries between states, countries and continents, allowing people to partake in moving images of places that were previously committed to their imaginations.

Computers were utilized to perform more and more tasks previously associated with human labor. The history of corporate, and then personal, computing unfolded so quickly that I almost missed its evolution as I threw my heart into games on the Atari 2600 and then programming on the Commodore 64. People invented new kinds of microchips and then cut their sizes in half while exponentially increasing their speeds and capacities.

Today, facts are instantly obtainable, as is communication between two distant persons. The world is no longer a huge place, and history is no longer a poetic principle; it's a spreadsheet-bound group of fields, a database to be sifted through. Japan is a keystroke or two away, and a plane ticket to Sidney can be obtained online. Rock groups promote themselves via digital recordings of their music that are stuck in video games, blurring the line between music and what once was an entertainment genre comprised of *Pong* clones. The latest coin-operated video games are outfitted with snowboard-shaped "controllers" on which players stand, scooter-shaped seats complete with handlebars, and other replicas of real-life outdoor vehicles; the visceral boundary separating the electronic reproduction of an activity and the invigorating sensation of the activity itself is becoming increasingly difficult to discern, particularly for very young participants, who possibly make up the first of several generations for which life will be reduced to a cheesy, hollow and bombastically "virtual" mirror of what once was regarded as the Real Thing.

There are series of numbers identifying us so our inventions can cope with our existences; consider the IRS, the local library, and even our membership numbers for bulletin boards or news groups. People die, but their DNA can still be determined by something as removed from living tissue as their cremation-rendered ashes. Scientists work hard at dissolving the line between real tomatoes or sheep and man-made ones. If we follow this digression of the thrill of life's varying and separate moods to its logical extreme, we find a world completely tapped and re-tapped into itself to the point of meaningless existences lived by people who don't have to leave their homes or even rise from their chairs. This comes as quite a surprise to a generation who was raised on the belief that the future held *Jetsons*-type air cars and, at the worst, pollution-warding masks.

It sounds like I'm attacking the notion of thinning lines outright. That's not my intention here, since I believe that some of this boundary dissolution is good for people interested in pursuing their interests. I mean, I like it that I can e-mail someone in Berlin if I want to, and I enjoy composing music out of samples of real instrument sounds and then plugging my 4-track stereo into the computer to make a recording. I'm not stating that it's time to stop progressing, i.e. being naturally human. And I certainly can't allow myself to believe that something as human and sexual as the latent eroticism inherent in the manipulation of everyday objects could ever disappear from the confounding ocean of human interaction. What I'm suggesting is that it's time for some aloofness, for a big-picture perspective. Because we may never need pollution masks, folks.

You don't worry as much about the air when you never have to go outside. -- CF

A Matter Of Perspective

(For Lack Of a Magic Word)

by Chris Federico

Do you remember the first video game you ever got? For most of us, it was burnt into the ROM of an Atari VCS cartridge. Mine was *Space Invaders;* I played it before I even opened *Combat.* But for a few of you, it was an Intellivision or ColecoVision title. Still others might have started with a Nintendo or Sega game, I suppose. A few of you poor suckers had an Odyssey 2.

The point is, that was your first game. And your second game was your second game. You had two. See what I mean? I'd bet money that you played those games relentlessly. It didn't even matter if they were Odyssey 2 games; they were all you had.

And getting a new game was an EVENT, right? Today it might be a cart that you'd stick into the unit and dismiss immediately. But back then, you'd have fixated on the game's good points and exploited them to their fullest. For weeks, you'd wake up and indulge in your new thrill, still thinking about it when you went to bed.

Now a new game isn't as much of a big deal. Why? Because now they're a buck apiece, and as a result you have tons. You don't throw all of your fascination into one or two titles, because you have a huge library at your fingertips.

Just a couple of years back, when I only had an Atari 2600 and a Commodore 64, I'd spend weeks on things that I now wouldn't consider worthwhile because of all of the other creative outlets I have on the Amiga. For instance, I had graph paper, pages from dismembered notebooks and multiple files dedicated to a story I was getting together on Electronic Arts's *Adventure Construction Set.* The engine (or master program or whatever) ran slowly, had icon-type characters and no animation, and was cumbersome to outfit with one's own data, but I stuck with it because I had a ball just creating something.

Likewise, I spent years mastering C-64 contests like *Beach-Head,* but now I'd expend all of that concentration on a war game with more depth like *Jungle Strike* on the Amiga. I still love to play the classics, but having so ***many*** at hand has caused me to spread my enthusiasm much more thinly over games that I would have focused on fanatically.

But you know what's funny? The feeling is the same. I was ***creating*** something on that C-64, and it felt just as good as working with the Amiga a year or two later. I played 2600 *Defender* doggedly when I first got it, and although *Duke Nukem* on the PlayStation is much more advanced in innumerable ways, the fascination feels the same. There's something inside the artist and/or gamer that feels good when it's let out, and when you get right down to it, ***the vehicle doesn't matter.***

Playing a video game sets a certain, indefinable sort of magic in motion. The player is quite deliberately suspending belief and allowing himself to be taken into a world that is not the one he physically lives in. He is interacting with imaginary characters and objects with an intensity that suggests that somewhere in his mind, they're actually real things. He is living and breathing within the parameters of someone else's imagination, triggering his own and adding his outlook and abstract ideas to those already intended for the game.

So if you only owned *Chopper Command* and *Combat* when you were younger, you got a taste of what it felt like to engage in that magical participation, and the physical existence of those vehicles in your tiny collection -- those two games -- took a back seat to the actual interaction you enjoyed. Now you have 200 games, and although you might go through 25 of them in one sitting, you're simply indulging in that feeling from different angles.

What I wonder about are kids born into the NES/Sega era, and those who will come to be game enthusiasts with only the most recent machines at hand. The presentation of programmed worlds is taken for granted if you're born into a society in which video games are already so popular. We who remember the advent of the VCS still retain a tiny bit of fascination for the simple fact that miniscule little lights on our screens are being shaped to render the illusions of moving, cartoony figures that we can control. We realize deep down that these are scientific miracles. That's why the first *Pong* games were so enchanting to people in the '70s. It was astounding that a human, normally limited to the passive viewing of late-night movies, could have anything to do with the movement of the images.

Kids born into this technological era take the scientific miracle of electronic representation for granted, so I'm just pondering the lack of that subconscious fascination with the actual process. Maybe it'll turn out to be a good thing; someone who takes it for granted won't carry the psychological hang-up about how impossible the process seems to us older enthusiasts (no matter how much we actually do understand), and so they'll more easily move ahead, invent more advanced technology and possibly even come up with a few miracles themselves. -- CF